

ABSTRACT OF THE DISCLOSURE

The contrast between solder balls and substrate of a Ball Grid Array (BGA) as visualized by a camera of a computer vision system is improved sufficiently to enable  
5 reliable recognition in the poor contrast situation when the balls are silver colored and the substrate background is white or light colored by illuminating the BGA with polarized light, and the camera viewing the light reflected from the BGA via a polarization filter oriented to not pass  
10 light reflected from the solder balls but to pass light reflected from the substrate.